

1 1. (Previously Amended) A computer-implemented method for generating a table of  
2 contents for a document using information in said document, comprising:  
3 building a model of said document including an initial semantic structure;  
4 detecting hierarchical changes in said semantic structure spanning different scales;  
5 and  
6 ordering said changes into entries in said table of contents based on scale span.

1 2-9. (Canceled)

1 10. (Previously Amended) The method of claim 1 wherein said building further comprises:  
2 defining a vector of terms occurring in said document; and  
3 mapping said document into a vector space by projecting scaled term occurrence  
4 histogram data onto said vector of terms and summarizing said terms using  
5 singular-value decomposition.

1 11-14. (Canceled)

1 15. (Previously Amended) The method of claim 1 wherein said detecting further comprises:  
2 applying successively smaller scale filter windows to said model according to said  
3 initial semantic structure to construct a map of said changes versus scale;  
4 identifying local peaks in said contour map, said peaks being points of maximum  
5 vector derivative magnitude;  
6 tracing said local peaks back to a semantic structure change origin point; and  
7 measuring a span of scales over which each said change exists.

1 16. (Canceled)

1 17. (Previously Amended) A system for generating a table of contents for a document using  
2 information in said document, comprising:  
3 means for building a model of said document including an initial semantic structure;  
4 means for detecting hierarchical changes in said semantic structure spanning  
5 different scales; and  
6 means for ordering said changes into entries in said table of contents based on scale  
7 span.

1 18. (Currently Amended) A computer program product comprising a machine-readable  
2 medium tangibly embodying ~~having~~ computer-executable program instructions thereon for  
3 generating a table of contents for a document using information in said document, including:

4 a first code means for building a model of said document including an initial  
5 semantic structure;

6 a second code means for detecting hierarchical changes in said semantic structure  
7 spanning different scales; and

8 a third code means for ordering said changes into entries in said table of contents  
9 based on scale span.